

FIGURE 1

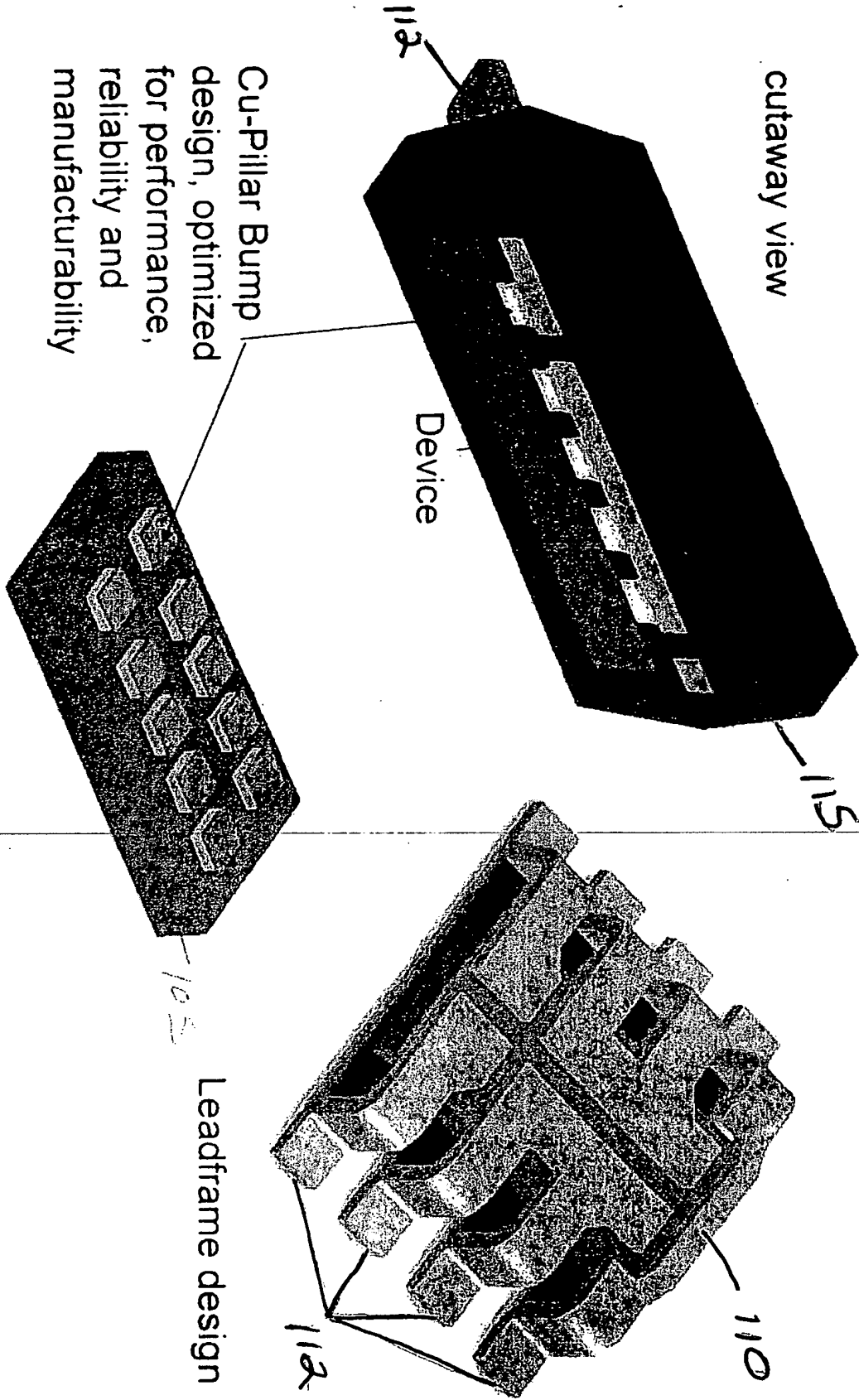


FIGURE 2A

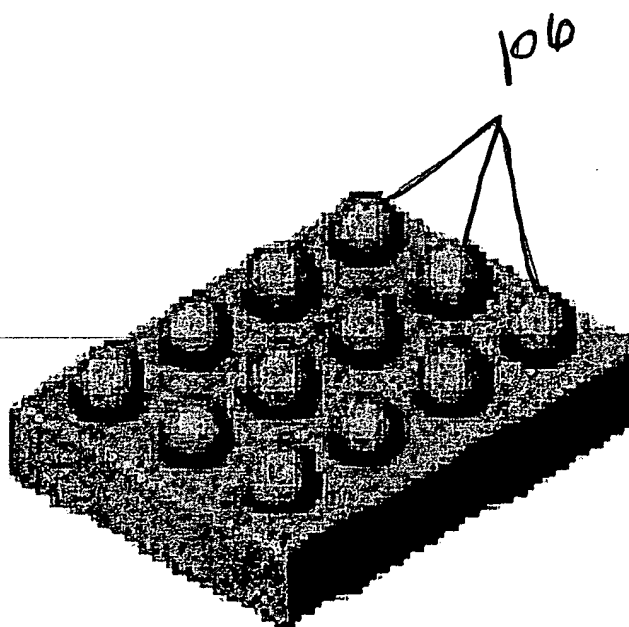
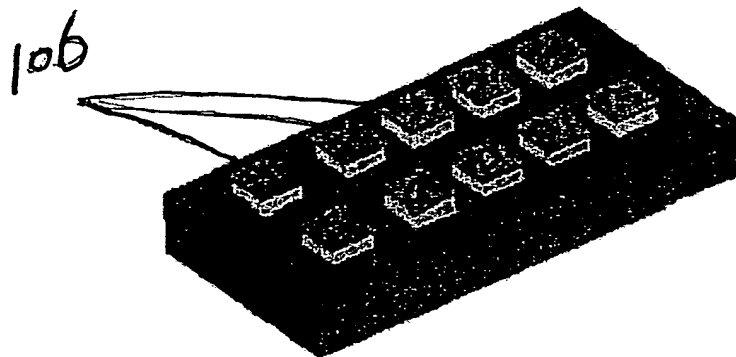


FIGURE 2B

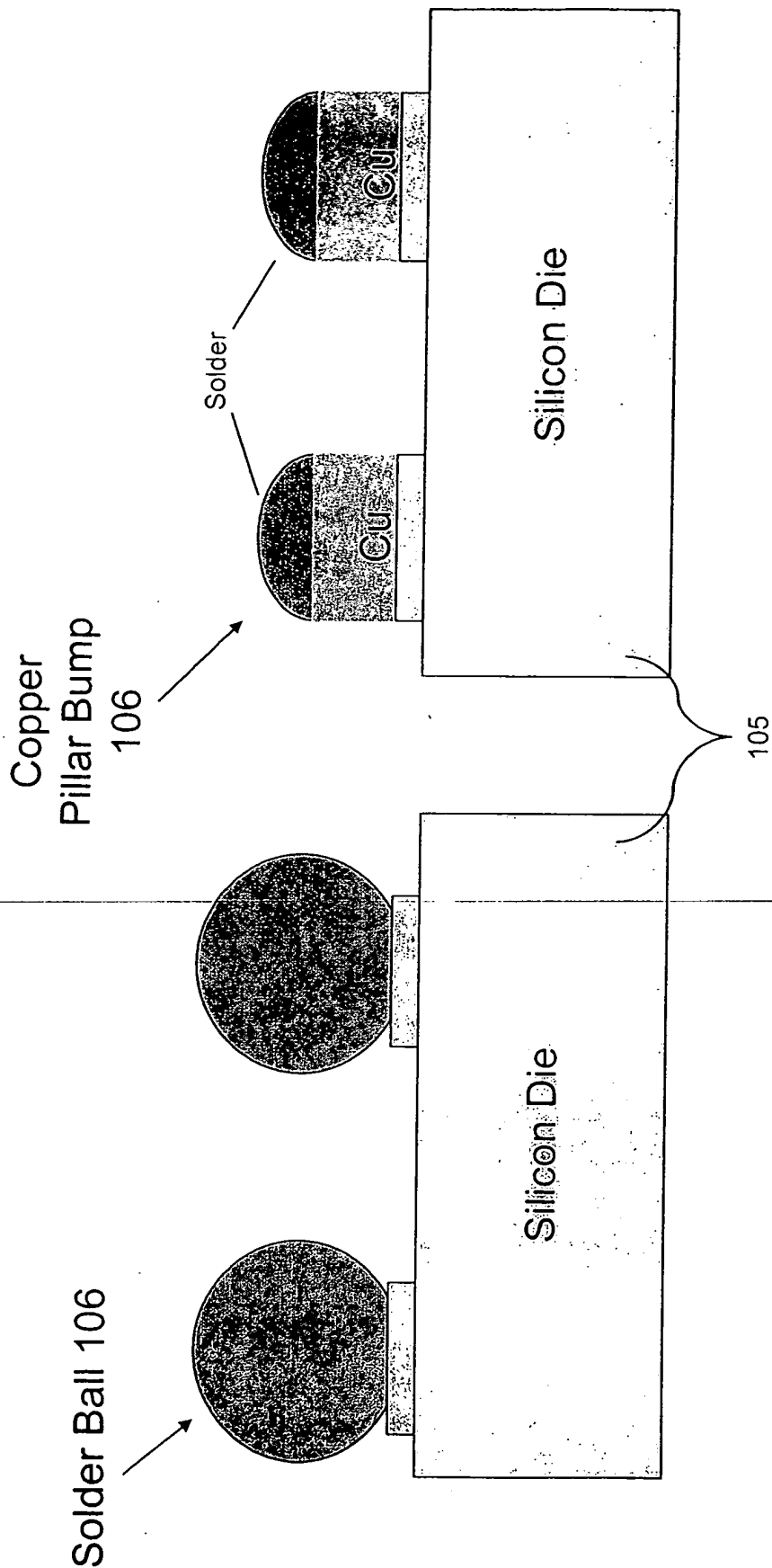


FIG. 2C



FIGURE 3

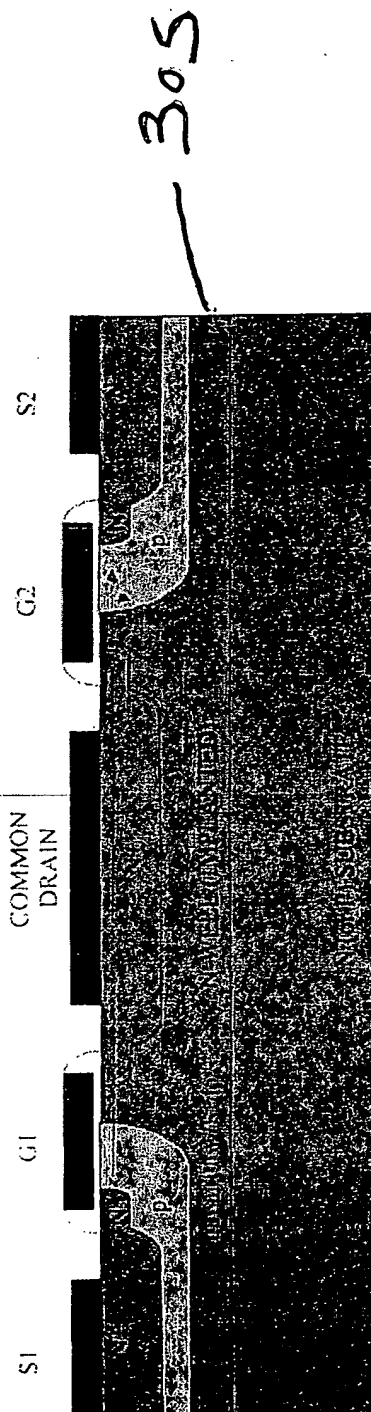
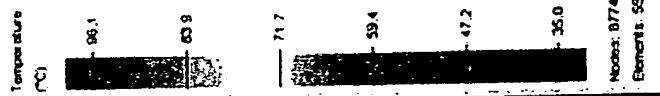
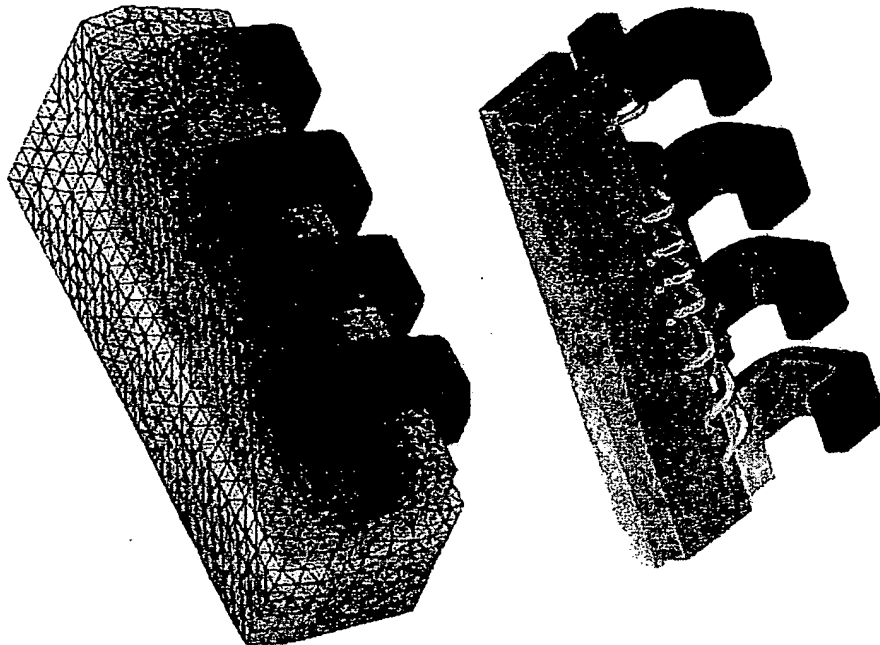


FIGURE 4

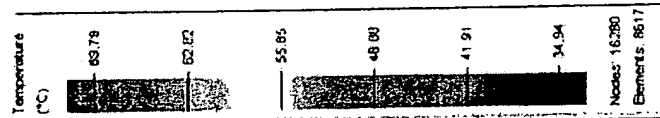
Conventional Package



$$\Delta T = 61.1$$

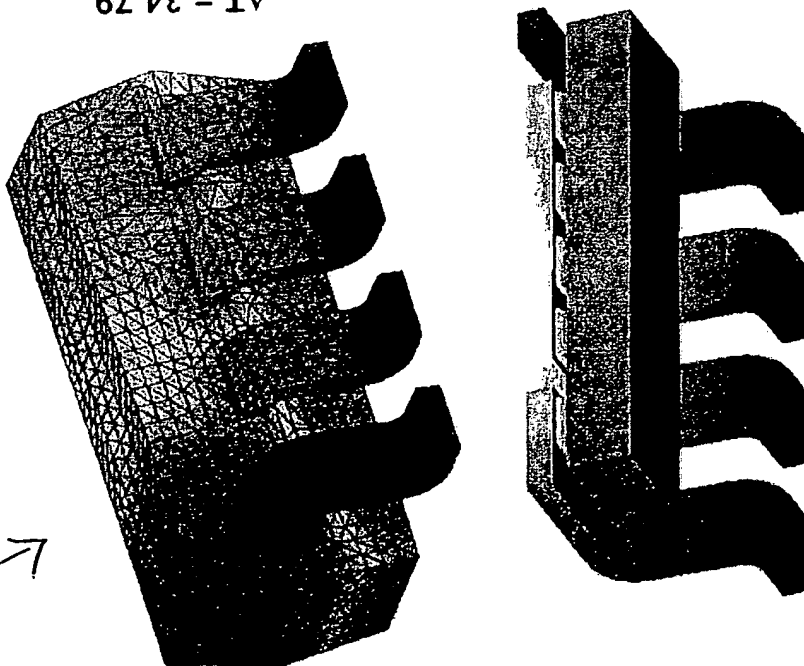


$$\theta = \frac{\Delta T}{\text{Power}} = 61.1^{\circ}\text{C/W}$$



$$\Delta T = 34.79$$

100



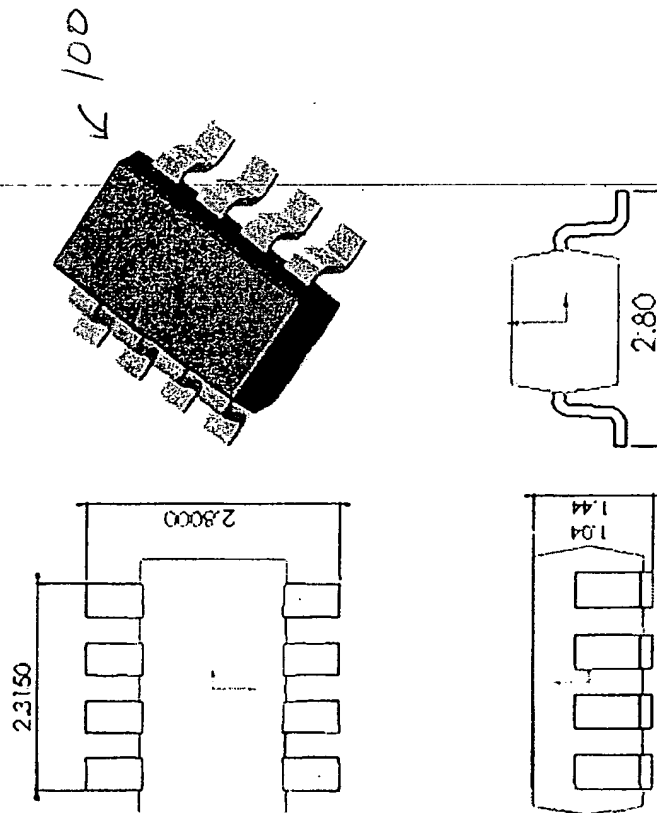
$$\theta = \frac{\Delta T}{\text{Power}} = 34.79^{\circ}\text{C/W}$$

Summary of Results

FIGURE 5

Analysis	CONVENTIONAL PACKAGE	INVENTION 100
Mold Compound		
Leadframe		
Die		
Solder on Pillars		
Cu Pillars		
Gold wirebonds		
Die attach		
Max Displacement		
Mold Compound	2.35E+08	7.16E+07
Leadframe	1.06E+08	8.14E+07
Die	2.35E+08	5.73E+07
Solder on Pillars		6.21E+07
Cu Pillars		9.90E+07
Gold wirebonds	2.35E+08	
Die attach	6.51E+07	
Max Displacement	3.1 uM	1.93 uM
Mold Compound		
Leadframe		
Die		
Solder on Pillars		
Cu Pillars		
Gold wirebonds		
Die attach		
Max Displacement		
Mold Compound	2.48E+08	1.28E+08
Leadframe	2.99E+08	3.28E+08
Die	2.48E+08	1.08E+08
Solder on Pillars		1.14E+08
Cu Pillars		1.78E+08
Gold wirebonds	2.48E+08	
Die attach	9.32E+07	
Max Displacement	4.0 uM	5.3 uM
Mold Compound		
Leadframe		
Die		
Solder on Pillars		
Cu Pillars		
Gold wirebonds		
Die attach		
Max Displacement		
Mold Compound	2.29E+08	1.18E+08
Leadframe	2.76E+08	3.02E+08
Die	2.29E+08	9.99E+07
Solder on Pillars		1.06E+08
Cu Pillars		1.63E+08
Gold wirebonds	2.29E+08	
Die attach	8.60E+07	
Max Displacement	3.7 uM	4.9 uM

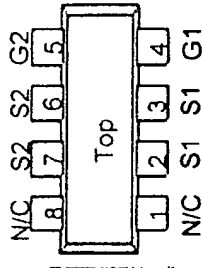
Fig. 4



BEST AVAILABLE COPY

Fig. 7

100



- Notes:
1. Dimensions and Tolerances per ANSI Y14.5M, 1982.
 2. Mirror finish on package surface.
 3. Footlength measured based on the gauge plane method.
 4. Dimension exclusive of mold flash and gate burr.
 5. Dimension exclusive of solder plating.

